

ABSTRACT

An optical fiber and an optical transmission system are provided which enable large-volume and long-haul transmission, using light signals having a plurality of wavelengths in a wide range of wavelength bands, including the 1.31 μm band, 1.45 μm band, 1.55 μm band and 1.58 μm band. The chromatic dispersion of the optical fiber according to the present invention is $-20 \text{ ps} \cdot \text{nm}^{-1} \cdot \text{km}^{-1}$ or more but $-3 \text{ ps} \cdot \text{nm}^{-1} \cdot \text{km}^{-1}$ or less in the whole wavelength range of 1300 nm to 1600 nm. The optical transmission system according to the present invention is also equipped with (1) a plurality of transmitters to transmit light signals having wavelengths in the range of 1300 nm to 1600 nm, (2) an optical fiber of the present invention, and (3) receivers which receive the light signals.